



School-to-Work:

Strategies to Expand Students' Horizons

ACADEMIC ACHIEVEMENT



HOW do we measure students'

progress in the “core” academics: math, English, science, and social studies? Standardized testing is one of the tools that usually comes to mind. Results of these tests can give educators, policymakers, and parents a way to compare children’s progress against a benchmark. For this reason standardized testing is a widely used indicator of student academic achievement, but it isn’t the only one. There’s a lot of other evidence that should be considered.

Getting a more complete picture about students’ academic progress means moving beyond standardized test scores and looking at other results, such as grade-point averages, graduation from high school, transition to postsecondary education, and employment in high-skill career fields.

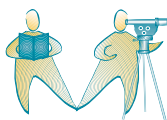


Research shows that school-to-work strategies

can brighten these big-picture outcomes for students. School-to-work (STW) is an educational approach that engages students in learning by giving schoolwork real-life context, inspiring curiosity, and helping young people see how academic concepts serve an essential purpose in the world. This brief provides a glimpse of how

STW programs in many different areas of the United States are improving academic achievement for high school students.

Indicators of Achievement



Engagement

Turning students on to learning is a key first step toward achievement. A basic ingredient of engagement is communicating unfamiliar concepts in ways that speak to young people. STW encourages “active learning” strategies that enable students to apply academic knowledge in settings both inside and outside school. When students feel a connection to their studies, they can learn more.



Grades

Like test scores, grades are a traditional measure of progress, but they reflect much more than one-time results on an exam. Group projects, papers, lab work, homework, individual effort, and other criteria—including test results—enter into a student’s final class grade.



Graduation Rates

Keeping students on track for graduation is the goal of every high school teacher and administrator. School-to-work can engage more students in their learning, increasing the odds that they will come to class regularly, stay in school, and complete their high school education.



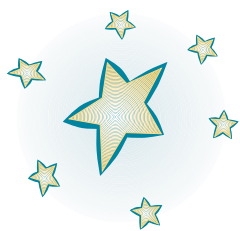
Postsecondary Transition

What students do after they graduate is the ultimate indicator of sound high school preparation. A major objective of the STW initiative is to give more students a strong academic foundation to help them qualify for postsecondary education and pursue their career goals.



Employment

Career success is another signpost of achievement. Through its focus on career exploration and work-based learning, STW helps students understand their options and appreciate the education required for different types of careers.



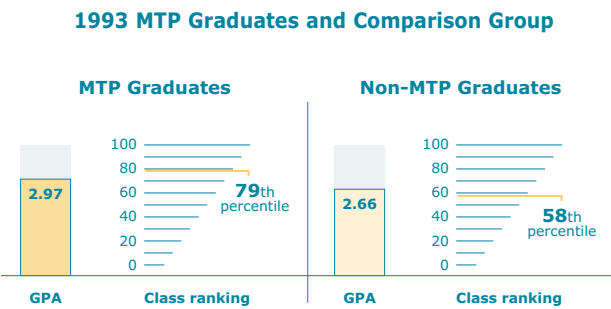
THE SCHOOL-TO-WORK ADVANTAGE

Quality school-to-work programs engage students in their learning by giving them a reason to come to school and demonstrating how academics are applied in real life. Students who have been involved in STW programs often graduate at higher rates, get better grades, and are more likely to enroll in postsecondary education and secure high-skill jobs than students who do not participate in either STW or traditional college-prep programs. Here are some examples from around the country.

Many findings noted in this brief are from state and local STW evaluations conducted on small student samples. Most findings cannot be generalized to other settings, but they are included because they provide important pieces of evidence that, taken together, offer a clearer picture of outcomes for students who are involved.

✓ Flint, Michigan

Students in the Manufacturing Technology Partnership (MTP), a General Motors-sponsored program that combines school- and work-based learning, had higher grades and class rank and fewer absences than their peers who did not enroll in MTP, a 1996 study shows.¹



✓ Boston

Boston’s Pro Tech program, which links high school students enrolled in career pathways to internships in seven industries, found in 1997 that its students were more likely to attend college, to remain in college, or to be working (and earning higher wages) than their peers.² Another study of 1,169 Boston students enrolled in a career pathway during the 1996–97 school year and a sample from 3,924 students who were not enrolled indicated the career pathway students were more engaged in school, had a lower dropout rate, better attendance and fewer suspensions than their peers.³

¹Hollenbeck, K. (1996). *An Evaluation of the Manufacturing Technology Partnership (MTP) Program*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

²Jobs for the Future. (1997). “School-to-Career Initiative Demonstrates Significant Impact on Young People.” Boston: Author.

³Boston School-to-Career Report, www.stw.ed.gov

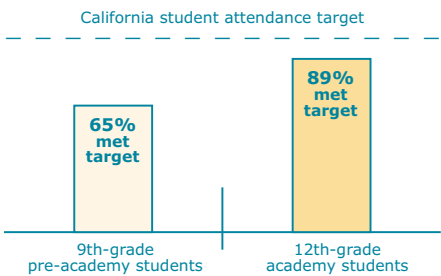
✓ New York State

Surveys of 525 seniors from 25 New York high schools and 200 recent graduates, conducted in 1997, found that students who had experienced STW attended school more regularly and felt more challenged in their academic studies than their counterparts in a control group.⁴ The students enrolled in college at about the same rate and had similar grades—an overall C+ average—although students who participated in work-based learning and career development activities took more challenging courses.

✓ California

A 1997 study of California academies, which organize academics around several broad career fields, indicates that students who stayed in the academies through their four years of high school showed improvements in attendance, credits toward graduation, and grade-point averages. “Many of my students come to me at-risk and leave college bound,” said a California academy director in an interview with STW researchers.⁵

Effect of Academies on State Attendance Targets



⁴The Westchester Institute for Human Services Research, Inc. “New York State’s STW Initiative Demonstrates Promising Student Results.” *The School to Work Reporter*, July 1998.

⁵Bailey, T., and Merritt, D. (1997). *School-to-Work for the College-Bound*. Berkeley, CA: National Center for Research in Vocational Education.



An analysis of data from the National Longitudinal Survey of Youth-1997,* which sampled nearly 9,000 students ages 12 to 16, found that 43 percent participated in at least one school-to-work activity, most commonly a “career major.” Compared with peers who did not participate in any school-to-work program, these students were more likely to take biology and other lab science courses and honors courses in mathematics and science.

Students who were involved in school-sponsored enterprise, which was defined as “the production of goods or services by students for sale or use by others,” were more likely to have taken math courses such as Algebra I, II, and higher, and honors courses in math and science. Students in internship and apprenticeship programs enrolled in Algebra I and higher-level math courses as well as biology, chemistry, and any of the lab sciences more often than peers who did not participate in those programs.

*Bishop, J. et al. (February 2000). *Who Participates in School-to-Work Programs? Initial Tabulations*. Washington, DC: National School-to-Work Office.

✓ Philadelphia

In a 1998 study, after controlling for the influence of students’ prior grades, attendance, year in school, and school attended, Drexel University researcher Frank Linnehan found that work-based learning “significantly improved a student’s grade point average and attendance.”⁶

✓ Wisconsin

Graduates of the Wisconsin Youth Apprenticeship Program found higher-level jobs that paid more than the jobs held by students who wanted to work immediately after high school but didn’t go through the program. Seventy percent of those who responded to a survey after they graduated said their apprenticeship gave them access to high-wage employment opportunities, and 96 percent said they intended to pursue these careers—such as financial services and biotechnology—in either two- or four-year postsecondary institutions.⁷

⁶Linnehan, F. (1998). *Work-Based Learning Research—Phase I*, Drexel University, unpublished manuscript.

⁷Phelps, L.A., and Jin, M. (1997). *Follow-up Survey of the 1995 Youth Apprenticeship Graduates*. Madison, WI: Wisconsin Department of Workforce Development.



THE KEY IS QUALITY



States and local school districts with school-to-work systems that positively influence academic achievement are those with a vision of how school-to-work fits within broader reform efforts. Successful programs share another trait: the clear commitment of schools, employers, labor unions, and postsecondary institutions to strengthen what and how students learn.

Studies of school-to-work programs show that these program traits are most likely to affect student achievement:

Academic rigor. School-to-work programs with impressive track records in math, science, English, and social studies achievement hold all students to high standards and expect them to master rigorous academic content.

Postsecondary links. School-to-work practitioners have eagerly pursued agreements between high schools and postsecondary institutions that smooth the transition for graduates. When teachers clearly communicate the expectation that all students should strive to continue their education after high school, and when they coordinate curricula with local postsecondary institutions, the likelihood is greater that students will attend college.

Integrated curriculum. Activities that combine both academic and work-related content engage students and help them learn in hands-on settings. In some exemplary schools, seniors are required to develop projects that focus on a career field and result in a research paper, a product, and an oral presentation.

Coherent career development sequence.

Schools need to train guidance counselors to help students select appropriate career pathways and majors that prepare them for further education and careers in addition to helping them explore postsecondary options. Students who are encouraged to think about their goals are better prepared for college or careers after high school.

Sustained professional development.

Both new and experienced teachers need training in methods that can engage students in learning, such as integration of academic, industry, and workplace-readiness standards; project-based learning; and career-related instruction. Ideally, that training is delivered systematically over an extended period and is tied to the state's academic standards.

Intermediary groups. Third-party organizations, often called intermediaries, handle the frequently time-consuming work of placing students in work-based experiences and ensuring they are linked with academic studies.



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This brochure is part of a series designed to focus on the individual elements that make up a successful school-to-work system.